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Filed:
January 10, 2005

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

HANS PETERSEN
and
MICHAEL HAROLD ROCK
(Application 09/794,755)

Junior Party,

v.

TETSUYA IKEMOTO, WEI-GUO GAO,
and
MASAMI IGI
(Application 10/086,076)

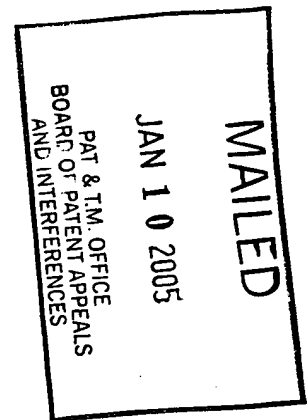
Senior Party

Patent Interference 105,075

Before McKELVEY, Senior Administrative Patent Judge, SCHAFER, and MOORE,
Administrative Patent Judges.

MOORE, Administrative Patent Judge.

DECISION - PRELIMINARY MOTIONS - Bd. R. 125(a)



A. Background

This interference is before us for decision on the preliminary motions of the parties. This decision addresses the following preliminary motions, which have been filed:

(I) Junior Party Petersen (hereinafter “Petersen”) Preliminary Motion 1 (Paper 23) seeking to redefine the interfering subject matter pursuant to 37 CFR §1.633(c) (1) and (3) [now 37 CFR §41.121(a)(1)(i)] by adding a new count 2 and adding Petersen Application 10/228,388 to the interference.

(II) Petersen Preliminary Motion 2 (Paper 24) seeking to declare an additional interference pursuant to 37 CFR §1.633(e) [now 37 CFR §41.121(a)(1)(i)] between Ikemoto’s U.S. Patent 6,310,222, the involved Petersen Application 09/794,755, and/or Petersen Application 10/228,388.

(III) Petersen Preliminary Motion 3 (Paper 25) seeking to have Petersen accorded the benefit of Danish Patent Application PA 2000 00296, with respect to proposed Count 2, pursuant to 37 CFR §1.633(f) [now 37 CFR §41.121(a)(1)(ii)].

(IV) Petersen Miscellaneous Motion 4 (Paper 26) seeking to add Ikemoto U.S. Patent 6,310,222 and Petersen Application 10/228,388 to the interference, pursuant to 37 CFR §1.635 and §1.642 [now 37 CFR §41.121(a)(1)(i)].

(V) Senior Party Ikemoto (hereinafter “Ikemoto”) Motion to correct Inventorship (Paper 46) pursuant to 37 CFR §1.634 seeking correction of inventorship for application 10/086,076 by deleting Mr. Wei-Guo Gao as a named inventor under 37 CFR §1.48(b) [now 37 CFR §41.121(a)(2)].

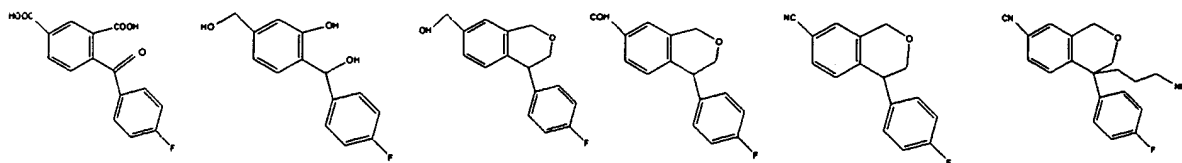
(VI) Ikemoto Preliminary Motion 1 (Paper 29) seeking, pursuant to 37 CFR §1.633(f) and (j) [now 37 CFR §41.121(a)(2)], to have the Ikemoto 6,310,222 patent accorded priority of Japanese Patent Application 11-311703.

An additional interference involving Ikemoto U.S. Patent 6,310,222 and Petersen Application 10/228,388 (Interference 105,231) has been declared. As a consequence, we **DISMISS** Petersen Preliminary Motions 1-3, **DISMISS** Petersen Miscellaneous Motion 4, and **DISMISS** Ikemoto Preliminary Motion 1.

We **GRANT** Ikemoto's Motion to Correct Inventorship.

B. Findings of Fact

1. This interference was declared November 7, 2003 (Paper 1, page 1).
2. Petersen is involved by virtue of its application 09/794,755 (see Paper 1, page 3).
3. Ikemoto is involved by virtue of its application 10/086,076 (see Paper 1, page 4).
4. The interference involves a process for the preparation of citalopram involving the following compounds and steps. For sake of consistency, the compounds and steps to form the compounds shall be referenced herein as follows. Compound 6 is citalopram.



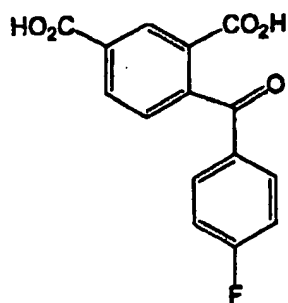
Compound 1 Compound 2 Compound 3 Compound 4 Compound 5 Compound 6

reducing (step 1) cyclizing (step 2) oxidizing (step 3) converting(step 4) alkylating (step 5).

5. Count 1 of this interference reads as follows:

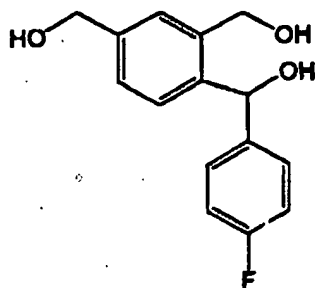
A method for the preparation of [Compound 6], comprising the steps of:

a) reducing [Compound 1]



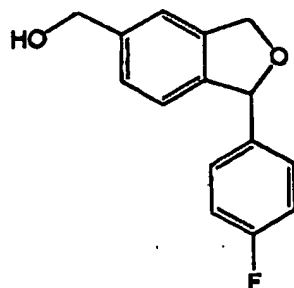
(1)

to form [Compound 2]



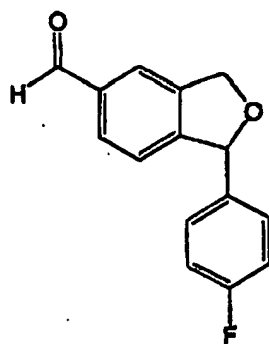
(2)

b) cyclizing or ring closing [Compound 2] to form [Compound 3]



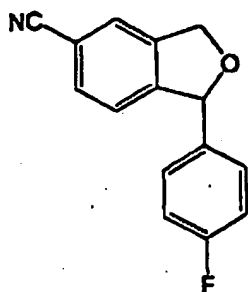
(3)

c) oxidizing [Compound 3] to form [Compound 4]



(4)

d) converting [Compound 4] to [Compound 5]



(5)

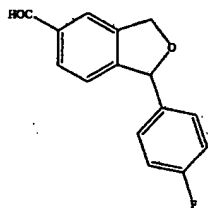
and

e) (1) alkylating [Compound 5] to form [Compound 6] as an acid or base addition salt thereof, or

e) (2) alkylating [Compound 5] to form [Compound 6]; and isolating [Compound 6] in the form of the base or an acid addition salt thereof. (Paper 1, pages 5-6)

6. Petersen Application 10/228,338 contains claim 4, which reads as follows:

[Compound 4]:



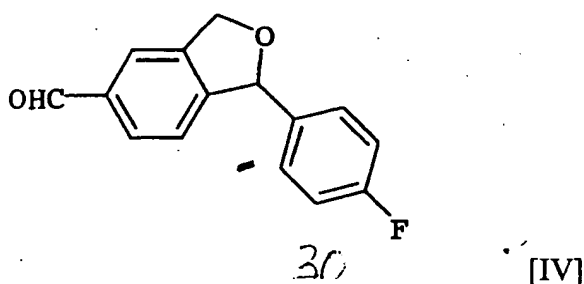
or an acid addition salt thereof.

7. Petersen Application 10/228,388 has been initially examined and is subject to two rejections, both provisional double-patenting rejections under 35 U.S.C. §101. The first provisional double patenting rejection is over application 10/286,407, which is now stated to be intentionally abandoned. The second provisional double patenting rejection is over 09/794,755, which is Petersen's involved application. (File history of 10/228,388, Paper 9 therein).

8. There is no art cited against Petersen's Application 10/228,388 other than the copending applications of Petersen.

9. Ikemoto Patent 6,310,222, issued October 30, 2001, and contains the following claim:

2. [Compound 4]



10. Ikemoto Patent 6,433,196 was filed September 5, 2000 and issued August 13, 2002. (Paper 51, fact 3; admitted at paper 60, page 3, lines 6-8).

11. Ikemoto '196 discloses a reaction involving the compounds outlined in fact 5.

12. Ikemoto '196, column 9, lines 8-20, describes a reduction step of Compound 1, which results Compound 2 of fact 5.

13. Ikemoto '196, column 11, line 57 – column 12, line 12, describes that the Compound 3 can be oxidized to Compound 4 with high yield.

14. Ikemoto '196, column 13, lines 57-column 14, line 30, describes that Compound 4 may be converted by oximation and dehydration to Compound 5.

15. Ikemoto column 14, lines 47 et seq., describe the alkylation of Compound 5 to form Compound 6 (citalopram).

16. Petersen Application 10/228,388 claims priority through PCT /DK01/00122 (Paper 22).

17. Petersen claims entitlement to the date of Petersen Danish Patent Application 2000-00296, filed February 24, 2000. (Paper 24, page 6, lines 5-7).

18. Petersen Danish Patent Application 2000-00296 antedates Ikemoto '196.

19. Petersen Danish Patent Application 2000-00296 (Exhibits 2008 and 1003) describes the 5 step process for going from compound 1 to compound 5 is disclosed as another "advantageous method" at page 7, lines 20-40.

20. Petersen Danish Patent Application 2000-00296 describes the conversion of 5-cyano-1-(4-fluorophenyl)-1,3-dihydrobenzofuran [Compound 5] by alkylation followed by conversion of the alkyl group to a dimethylaminopropyl group to citalopram [Compound 6] at page 2, line 10 – page 3, line 4.

21. Petersen Danish Patent Application 2000-00296 (Exhibits 2008 and 1003) describes compound 4. (Exhibit 1003, page 7 (top number) page 10(bottom number)).

22. One of ordinary skill in the art as of February 24, 2000 would have been either (I) a person with at least a bachelor's degree in chemistry with specialty in organic synthesis; and 1-2 years of experience in organic synthesis if not that specialty (Exhibit

2011, paragraph 4) or (II) a person with a BS degree in chemistry (Exhibit 1019, paragraph 3). This person would have knowledge of organic synthesis, including reactions and mechanisms.

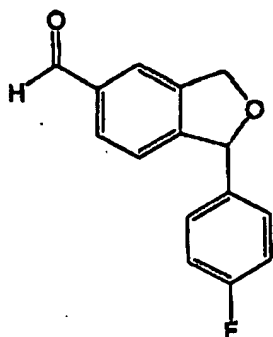
23. The art is not predictable in that surprising results may still be obtained. (Exhibit 2008, page 2, lines 1-3).

C. Discussion

(I) Petersen Preliminary Motion 1 (Paper 23)

Petersen's Preliminary Motion 1 (Paper 23, page 3) seeks to redefine the interfering subject matter by adding a count directed to an aldehyde compound (Compound 4 in step (c) of present count 1); add Petersen application 10/228,388 to the interference, and designate claims of Petersen and Ikemoto as corresponding to new count 2. The proposed count 2 is as follows:

[Compound 4]



or an acid addition salt thereof¹.

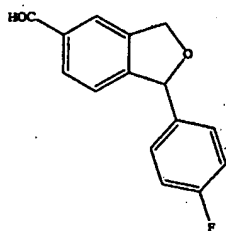
¹ The language "or an acid addition salt thereof" is erroneous. As has been established by Ikemoto's opposition and Petersen's admission, acid addition salts of this aldehyde compound do not exist. (Paper 30, page 3, facts 6, 7 and Exhibit 1004, Paragraph 4).

As an additional interference concerning Compound 4 (Interference 105,231) has been declared. As this preliminary motion seeks essentially the same relief, Petersen preliminary motion 1 is therefore dismissed as moot.

(II). Petersen Preliminary Motion 2 (Paper 24)

Petersen's preliminary motion 2 (Paper 24, page 3) seeks the declaration of an interference between Ikemoto Patent 6,310,222 and involved Petersen 09/794,755 and/or Petersen 10/228,388 involving the following count:

[Compound 4]:



or an addition salt thereof.

As noted above, an additional interference (Interference 105,231) has been declared directed to Compound 4 alone. We likewise dismiss Petersen Preliminary Motion 2, which seeks this relief, as moot.

However, as Ikemoto has raised arguments against the declaration of the additional interference concerning this subject matter, we deem it prudent to discuss the reasoning behind declaring the additional interference.

The 35 U.S.C. §112/135(b) issues

Ikemoto initially opposes declaring an additional interference because the alternative species of "acid addition salts" are "impossible" compounds (Paper 31, page 3, fact 9). Therefore the specification does not comply with 35 U.S.C. §112, first paragraph in that the proposed count and claim do not define patentable subject matter in

accordance with the written description, enablement, and definiteness requirements of 35 U.S.C. §112. (Paper 31, page 8, lines 10-11).

In its Reply, Petersen seeks to amend claim 4 of the '388 application to delete the phrase "or acid addition salts thereof" and also to delete the phrase from proposed Count 1. (Paper 37, page 2, lines 6-10). According to Petersen, the language was included "in error" (Paper 37, page 4, lines 8-9). Petersen also alleges that Petersen was in possession of the interfering subject matter before Ikemoto's earliest filing date. Petersen then urges it would be appropriate, and foster administrative economy, to resolve priority of the interfering aldehyde Compound 4 together with the subject matter of the declared interference. (Paper 37, page 4, lines 15-20).

Ikemoto was authorized to file a supplemental opposition (Paper 42) to Petersen preliminary motion 2. Ikemoto, in its supplemental opposition to Petersen preliminary motion 2 urges that the phrase "or an acid addition salt thereof" is a material limitation because the difference in terminology renders the amended claim patentable, while the unamended claim is unpatentable (Id., page 8, lines 1-7).

We disagree with Ikemoto's position regarding the phrase "or an acid addition salt thereof." As noted above, Petersen's claim 4 of the '388 application includes the compound of Ikemoto's claim 2. Petersen's claim 4 also included an alternative (impossible or inoperative) embodiment. However, that alternative embodiment does not change the claimed principal embodiment, or act as a "material limitation" thereto when it is removed. Petersen's amended claim 4, stripped down, recites A or B, where B is removed. B was an alternative impossible species to that of A, which one of skill in the

art would recognize and disregard. In short - B is not a material limitation to A, and it simply does not exist. A has been claimed from the date of filing.

Consequently, Petersen's claim 4, as amended, does not appear to run afoul of 35 U.S.C. §112 or 135(b) even though the amendment deleted impossible compounds.

Petersen's motion to amend claim 4 of 10/228,388 is therefore **GRANTED**. An order shall issue in interference 105,231 directing filing and entry of the amendment.

Claim 4 Appears to Define Allowable Subject Matter

Additionally, the examiner who has been examining 10/228,388 has been consulted (37 CFR §1.640(b), third sentence), and based on consultation it appears that, but for the §101 rejections, claim 4 is allowable.

(i) The rejection over copending application 10/286,407

As regards the rejection over copending application 10/286,407, Petersen has represented that the '407 application has intentionally gone abandoned (10/228,388, Paper 10, and representations made during this interference). Accordingly, Petersen **shall** file a notice of express abandonment of 10/286,407 with the Board no later than **January 28, 2005**. Upon return to the Tech Center, the examiner may hold 10/286,407 abandoned.

(ii) Ikemoto '222 as 35 U.S.C. §102(e) Prior Art

Ikemoto urges that Petersen's claim 4 (of application '388) is not patentable to Petersen by virtue of Ikemoto's '222 patent being 35 U.S.C. §102(e) prior art (Paper 31, paragraph spanning pages 9-10).

However, it appears to us that Petersen Danish Patent Application 2000-00296 discloses Compound 4 at page 7 (or page 10) of Exhibit 1003. Accordingly, we are

unpersuaded at this time that Ikemoto's '222 patent is effective 35 U.S.C. §102(e) prior art against Compound 4.

(iii) The Rejection over Copending Application 09/794,755

As regards the rejection over copending application 09/794,755, we observe that claim 4 of the '388 application is directed solely to the compound, while claims 6 and 7 of the '755 application are method steps including reducing a dicarboxylic compound to form a dihydroxymethyl compound. These claims are not directed to the same patentable invention in the sense of 35 U.S.C. §101.

Accordingly, we are of the opinion that, barring disclosure of new prior art, amended claim 4 of the '388 application is not unpatentable under §101.

We reach no conclusion regarding the other claims of the '388 application and shall require them to be cancelled from the application involved in interference 105,231.

(III) Petersen's Preliminary Motion 3

Petersen's Preliminary Motion 3 requests that, with respect to proposed count 2, Petersen be accorded benefit of the filing date of Danish Patent Application PA 2000 00296, filed February 24, 2000 for involved Petersen Application 09/794,755 or non-involved Petersen Application 10/228,388.

We have declared an additional interference (Interference 105,231) involving Patent 6,310,222 and Application 10/228,388 relating to the subject matter of proposed count 2 and accorded this benefit. Consequently, as there is no relief to be granted, we likewise dismiss this preliminary motion as moot.

(IV) Petersen's Preliminary Motion 4

Petersen's Preliminary Motion 4 seeks the addition of Ikemoto's Patent 6,310,222 and Petersen's Application 10/228,388 to the interference under proposed count 2. An additional interference (Interference 105,231) was declared relating to the subject matter of proposed count 2 and involving Patent 6,310,222 and Application 10/228,388. Consequently, as there is no relief to be granted, we dismiss this motion as moot.

(V) Ikemoto Motion to Correct Inventorship (Paper 46)

Pursuant to 37 CFR §1.634, Ikemoto seeks correction of inventorship for application 10/086,076 by deleting Mr. Wei-Guo Gao as a named inventor under 37 CFR §1.48(b). Petersen has not opposed this correction.

37 CFR §1.48 (b) provides that:

(b) Nonprovisional application—fewer inventors due to amendment or cancellation of claims. If the correct inventors are named in a nonprovisional application, and the prosecution of the nonprovisional application results in the amendment or cancellation of claims so that fewer than all of the currently named inventors are the actual inventors of the invention being claimed in the nonprovisional application, an amendment must be filed requesting deletion of the name or names of the person or persons who are not inventors of the invention being claimed. If the application is involved in an interference, the amendment must comply with the requirements of this section and must be accompanied by a motion under § 1.634. Amendment of the inventorship requires:

(1) A request, signed by a party set forth in § 1.33(b), to correct the inventorship that identifies the named inventor or inventor's being deleted and acknowledges that the inventor's invention is no longer being claimed in the nonprovisional application; and

(2) The processing fee set forth in § 1.17(i).

As it appears that Ikemoto has complied with the provisions of 37 CFR §1.48(b), and as a consequence the request to correct inventorship is **GRANTED**. This correction via the amendment and petition shall be entered.

(VI) Ikemoto Preliminary Motion 1 (Paper 29)

Ikemoto seeks, pursuant to 37 CFR §1.633(f) and (j), to have the Ikemoto 6,310,222 patent accorded the filing date of Japanese Patent Application 11-311703. As the '622 patent is now involved in interference 105,231, this motion shall be dismissed as moot in this interference.

D. Conclusion

It is hereby **ORDERED** that:

Petersen Preliminary Motion 1, Petersen Preliminary Motion 2, Petersen Preliminary Motion 3, and Petersen Miscellaneous Motion 4 are hereby **DISMISSED**.

Ikemoto's Motion to Correct inventorship is **GRANTED**.

Ikemoto Preliminary Motion 1 is **DISMISSED**.

Petersen's Proposed Amendment to Claim 4 of application 10/228,388 shall be entered as directed in interference 105,231.

Petersen shall cancel claims 1-3 and 5-6 of application 10/228,388 as directed in interference 105,231.

Petersen shall file a notice of express abandonment with the Board in application 10/286,407 as directed in interference 105,231.

A copy of this order shall be entered in interference 105,231, and the files of applications 10/286,407 and 10/228,388.

<u>McK</u>)	
FRED E. McKELVEY)	
Senior Administrative Patent Judge)	
)	
<u>RESch</u>)	
RICHARD E. SCHAFER)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS
)	AND
)	INTERFERENCES
)	
<u>James T. Moore</u>)	
JAMES T. MOORE)	
Administrative Patent Judge)	

Date: January 10, 2005
Alexandria, VA

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INTERFERENCE DIGEST

Interference No. 105,075

Paper No. 16

Name: Tetsuya Ikemoto et al.

Serial No.: 10/086,076

Patent No.

Title: PRODUCTION METHOD OF CITALOPRAM, INTERMEDIATE THEREFOR AND
PRODUCTION METHOD OF THE INTERMEDIATE

Filed: 02/28/02

Interference with Petersen et al.

DECISION ON MOTIONS

Administrative Patent Judge, _____ Dated, _____

FINAL DECISION

Board of Patent Appeals and Interferences favorable Dated, 1/10/05

Court, _____ Dated, _____

REMARKS

This should be placed in each application or patent involved in interference in addition to the interference letters.